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On the genera *Emdenia* SPAETH, 1915 and *Austropsecadia*
HINCKS, 1950
(Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. Two monotypic Australian genera, *Emdenia* and *Austropsecadia*, are redescribed and figured. The genus *Emdenia* is unique and not related to any Old World genus. The genus *Austropsecadia* is closely related to Oriental *Thlaspida* WEISE, Papuan *Meroscalsis* SPAETH and Australian *Melichrocassis* SPAETH.

This paper is the third concerning the revision of the specialized genera of the Old World *Cassidini*. In previous papers the revisions of the genera *Rhacocassis* and *Malayocassis* have been included (BOROWIEC 1987, 1991).

The genus *Emdenia* has been described by SPAETH (1915) for a single species, *Chirida maxima* BLACKBURN, 1896. No comparative characters with other Old World genera of *Cassidini* have been described.

WEISE (1899) proposed the genus *Psecas* for a single species, *Psecas chlorina* WEISE, 1899, but the generic name has been preoccupied by *Psecas* KOCH, 1850. In 1900, WEISE proposed a new name *Psecadia* for the *Psecas* WEISE not KOCH, but the name also has been preoccupied by KOCH (1850), so HINCKS (1950) proposed a new name *Austropsecadia* for *Psecadia* WEISE not KOCH. This genus has never been redescribed. Short diagnose by WEISE (1899) includes no comparative characters with other Old World genera of *Cassidini*.

The present paper includes a detailed generic redescription of *Emdenia* and *Austropsecadia* including comparative notes on other Old World genera of *Cassidini*. I have studied all important collections of

Australian and Papuan *Cassidinae* nad have not found other species of the genera except the type species. Both species are known from a several specimens only, their host plants and bionomy are unknown.

I have examined specimens from the following collections (in brackets the names of curators):

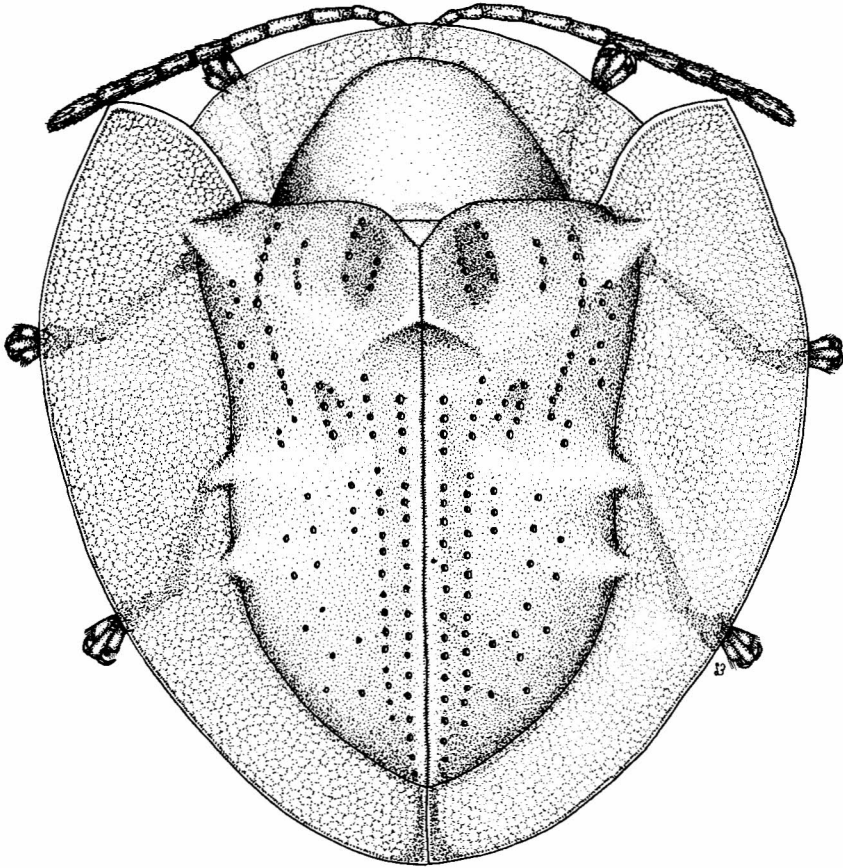
- BMNH British Museum (Natural History), London (R. A. J. ALDRIGE),
 CAS – California Academy of Sciences, San Francisco (D. KAVANAUGH),
 DEI – former Deutsche Entomologische Institut, now Institut für Pflanzenschutzforschung, Eberswalde (L. DIECKMANN),
 LB – author's collection,
 MLM – MacLeay Museum, Sydney (D. S. (WOODY) HORNING Jr.),
 MM – Manchester Museum, Manchester (C. JOHNSON),
 QM – Queensland Museum, Brisbane (G. MONTEITH and J. SEDLACEK),
 SAM – South Australian Museum, Adelaide (E. MATTHEWS),
 ZMHU – Zoologisches Museum, Humboldt Universität, Berlin (F. HIEKE).

I would like to express my sincere thanks to all mentioned above curators for the loan of the specimens.

Emdenia SPAETH, 1915

Emdenia SPAETH, 1915: 236 (type species: *Chirida maxima* BLACKBURN, 1896, by monotypy); HINCKS, 1952: 340.

Large, body length: 10.5–14.0 mm. Body subtriangular in outline (fig. 1). Pronotum trapezoidal, with maximum width in anterior third, sides strongly angulate. Disc strongly convex, distinctly bordered from explanate margin, impunctate. Explanate margin broad, subhorizontal, impunctate, with honeycomb structure. Base of elytra distinctly wider than pronotum. Scutellum large, triangular. Anterior margin of elytron crenulate. Elytral disc angulate in profile, elytra with large, conical postscutellar tubercle (fig. 2). Postscutellar depressions distinct, each elytron with distinct principal depression and shallow depression at side of base of postscutellar tubercle. Puncturation of disc moderately large, only in two sutural rows regular and dense, in other parts of elytra very scarce and partly irregular. No submarginal row. Marginal row distinct, punctures below humerus connected with each other, form a deep cave (fig. 2). Dorsal margin of the cave distinctly crenulate. Explanate margin very broad, moderately declivous, impunctate, with honeycomb structure. Apex of elytral epipleura shortly pubescent. Venter of pronotum without antennal grooves. Prosternum deeply emarginate anteriorly, mouthparts

1. *Emdenia maxima*

free. Head horizontal, clypeus very short, about 1.8 times wider than long, flat, in anterior half with shallow median groove, and with several small punctures. Lateral grooves obsolete, lateral margins of clypeus slightly elevated. Labrum very small, about half the width of clypeus base, with anterior margin shallowly emarginate, without median keel. Eyes small, not longer than $\frac{2}{3}$ of head length, gena distinctly longer than width of first antennal segment. Prosternal collar very short, prosternal process moderately wide, moderately expanded apically, deeply canaliculate longitudinally, and with oval depression in the middle of apex (fig. 3). Antennae moderately long, extending beyond hind margin of pronotum by last three or four segments. Antennal segments stout, cylindrical, slightly telescoped, segment 3 about 1.2 times longer than 2. Four basal segments glabrous, scarcely pubescent, segment

5 much densely pubescent than 4 but not as densely as segment 6, six distal segments dull, extremely densely punctured and pubescent, punctures elongate, so segments appear longitudinally striate. Tarsi moderately broad, last segment distinctly longer than third segment, claws distinctly reaching beyond marginal setae of the third segment. Claws simple, without micropecten (figs 4, 5). Sexual dimorphism indistinct, males stouter than females, with slightly longer antennae.

Distribution: Australia (Queensland).

Comparative notes. *Emdenia* represents a unique genus with no related genera in Australian and Oriental Regions. At first glance it resembles South African genus *Basipta*, especially in similar outline of pronotum and elytra. *Basipta* has also short clypeus, simple tarsal claws and prosternal process canaliculate longitudinally, but differs from *Emdenia* in shorter antenna with distinct segments not telescoped and longitudinally striate, anterior margin of clypeus distinctly elevated, prosternal process strongly expanded apically, labrum moderately large, dorsal part of body pubescent, pronotal disc punctate, and puncturation of elytra extremely dense, irregular, and explanate margin of elytra punctate. In my opinion, the similarity between *Basipta* and *Emdenia* is rather an effect of evolutionary parallelism than their close relationships, although they represent probably the old branch of specialized cassids. Their relict character is also confirmed by geographic distribution, because *Basipta* is South African endemic while *Emdenia* occurs only in NE Australia. The stout, longitudinally striated antenna occurs also in Paleotropical tribes *Basiprionotini* and *Epistictinini*, but they distinctly differ in head directed vertically, vertex and eyes higher than mouth, anterior margin of pronotum broadly emarginate, and head visible from above. Other specialized genera from Asia and Australia with elytra strongly angulate in profile distinctly differ from *Emdenia* in filiform antennae, elongate clypeus, prosternal process strongly expanded apically, claws micropectinate and often with basal tooth. No other genus has punctures of marginal row connected to form a deep cave.

Emdenia maxima (BLACKBURN, 1896)

(figs. 1–6)

Chirida maxima BLACKBURN, 1896: 104.

Metriona maxima: SPAETH, 1914: 142.

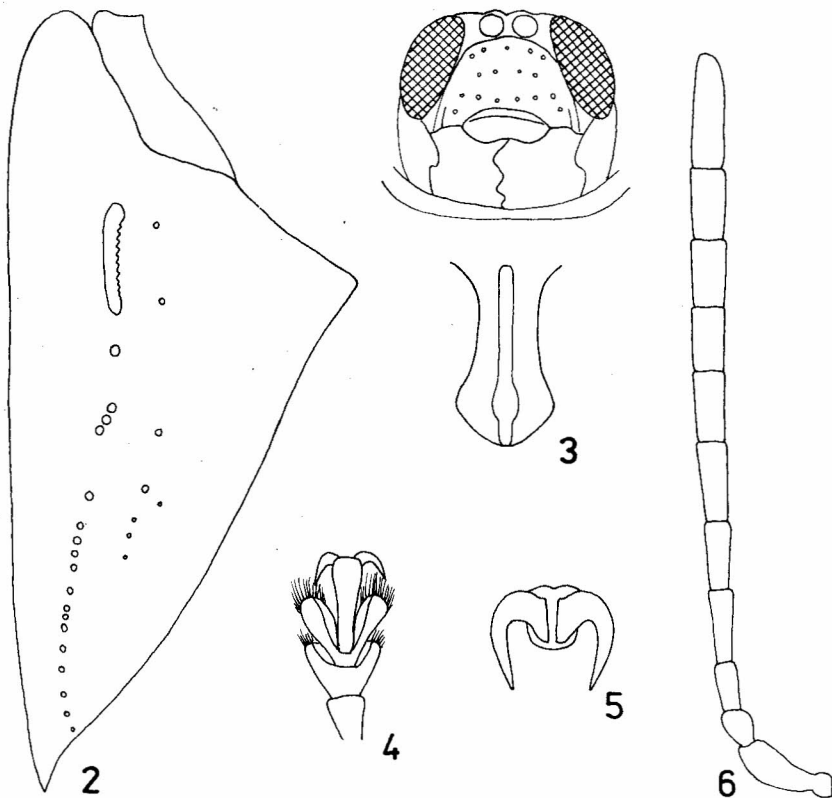
Emdenia maxima: SPAETH, 1915: 236.

Length: 10.5–14.0 mm, width: 9.0–11.7 mm, length of pronotum: 2.9–3.8 mm, width of pronotum: 5.0–7.2 mm.

Pale yellow, last six antennal segments more or less infuscate, sometimes black. Each elytron on ventral side with blackish spots, in

some specimens visible from above by slightly transparent surface of elytra: one large spot at base of elytron, one large in posterior half of elytron, two or three smaller at sides of disc, and small elongate along sutural rows. Apex of suture black.

Surface of pronotum glabrous, with very small and indistinct microreticulation. At sides disc bordered from explanate margin by shallow sulcus. Puncturation of elytra very characteristic: two regular rows along suture margined by slightly more depressed first interval, two rows margined by elevation between humerus and principal depression, several group in elytral depressions, and several are scattered on sides of disc but do not form a submarginal row. In sutural part punctures are large and dense, distance between punctures varying from about three times smaller than puncture diameter to about two times larger than puncture. Punctures in elytral depressions as large or slightly larger than in sutural



2-6. *Emdenia maxima*: 2 - body in profile, 3 - head and prosternum, 4 - tarsus, 5 - tarsal claws, 6 - antenna

rows, punctures of sides of disc distinctly smaller than in sutural rows. Punctures of marginal row about 1.5–2.0 times larger than in sutural rows. Humerus with large transverse fold; also lateral margin of elytral disc with transverse folds, one in the middle and second slightly beyond the middle. Explanate margin of elytra with narrow margination, especially in anterior half.

Length ratio of antennal segments: 100:40:45:70:70:75:65:55:60:60:120 (fig. 6). Metasternal plate regularly convex, not angulate. Mid femora without subapical tubercle, external side of tibia without longitudinal canaliculation.

MATERIAL EXAMINED

Australia, Queensland, Mulgrave R., HACKER, 2 (1 SAM, 1 DEI); Coen R., W. D. DODD, 4 (2 SAM, 1 MLM, 1 LB); Cairns, 3 (2 QM, 1 SAM); N. Queensland, BLACKBURN, 1 (SAM), N. Queensland, 2 (holotype BMNH, 1 MM), N. Queensland, 1938, 1 (LB).

Austropsecadia HINCKS, 1950

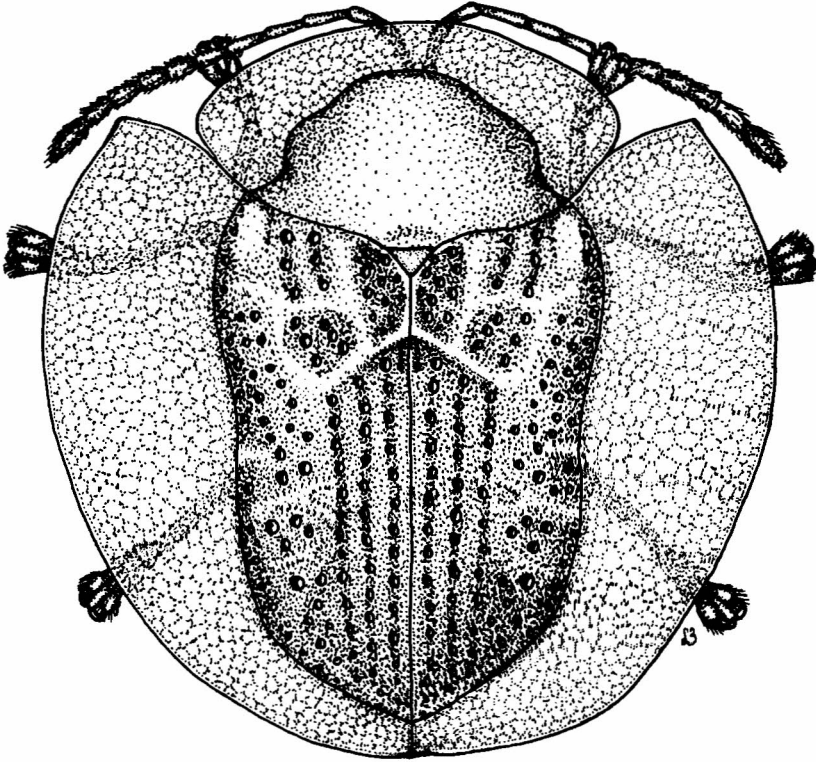
Psecas WEISE, 1899: 272 (not KOCH, 1850).

Psecadia WEISE, 1900: 458 (new name for *Psecas* WEISE nec KOCH, not KOCH, 1850).

Austropsecadia HINCKS, 1950: 508 (new name for *Psecadia* WEISE nec KOCH; type species:

Psecas chlorina WEISE, 1899, by monotypy); HINCKS, 1952: 340.

Moderately large, length 6.7–7.0 mm. Body subcircular. Pronotum trapezoidal, with maximum width distinctly in front of the middle, sides rounded. Disc moderately convex, distinctly bordered from explanate margin, especially on sides, its surface smooth, glabrous. Explanate margin broad, subhorizontal, smooth, glabrous, with honeycomb structure. Scutellum large, triangular. Base of elytra distinctly wider than pronotum. Anterior margin of elytron crenulate. Elytral disc angulate in profile, elytra with large conical postscutellar tubercle (fig. 8). Postscutellar depressions distinct, no principal depression. Puncturation of disc regular, large and extremely dense. Distance between punctures about twice smaller than puncture diameter. Intervals as wide to twice narrower than puncture diameter. In sides of disc, rows of punctures partly broken or disordered by transverse folds. Marginal and submarginal rows distinct. Punctures in marginal row about twice larger than in median rows. Explanate margin very broad, moderately declivous, smooth, shiny, with honeycomb structure. Apex of elytral epipleura shortly pubescent. Venter of pronotum without antennal grooves. Prosternum deeply emarginate anteriorly. Head horizontal, clypeus elongate, about as long as wide, flat, impunctate, with neither median nor lateral grooves (fig. 9). Labrum large, its anterior margin shallowly emarginate or with no emargination, posterior margin carinate. Eyes very small, gena about



7. *Austropsecadia chlorina*

as long as half length of eye. Prosternal collar extremely short, prosternal process broad, strongly expanded apically, canaliculate along sides, regularly convex and scarcely pubescent in the middle. Antennae moderately long, reaching beyond hind margin of pronotum by last three segments in female, and by four to five segments in male. Antennal segments slim, segment 3 about twice longer than 2. Six basal segments glabrous and scarcely pubescent, five distal dull and densely pubescent. Tarsi broad, last segment slightly longer than third one but claws not reaching beyond marginal setae of third segment (fig. 10). Claws simple, micropectinate, but appearing appendiculate due to distally projecting flanks of the claw segment (fig. 11). Sexual dimorphism indistinct, males stouter than females, with distinctly longer antennae.

Distribution: Eastern Australia.

Comparative notes. *Austropsecadia* belongs to the group of specialized genera with elytra more or less angulate in profile. From all these

genera differs in small eyes and extremely long gena. *Thlaspidula* SPAETH differs from *Austropsecadia* in labrum with median, longitudinal carina, *Rhacocassis* SPAETH — in presence of antennal grooves, *Meroscalsis* SPAETH — in presence of subapical tubercle on mid femora, *Lorentzocassis* SPAETH — in strongly arcuate anterior margin of elytron, *Hovacassis* SPAETH — in only three glabrous basal antennal segments, *Thlaspidosoma* SPAETH — in extremely long, filiform antennae reaching to hind coxae, and *Thlaspida* WEISE — in clypeus with distinct lateral grooves.

***Austropsecadia chlorina* (WEISE, 1899)**

(figs. 7–12)

Psecas chlorina WEISE, 1899: 272.

Psecadia chlorina: WEISE, 1900: 458; Spaeth, 1914: 129.

Austropsecadia chlorina: HINCKS, 1950: 508.

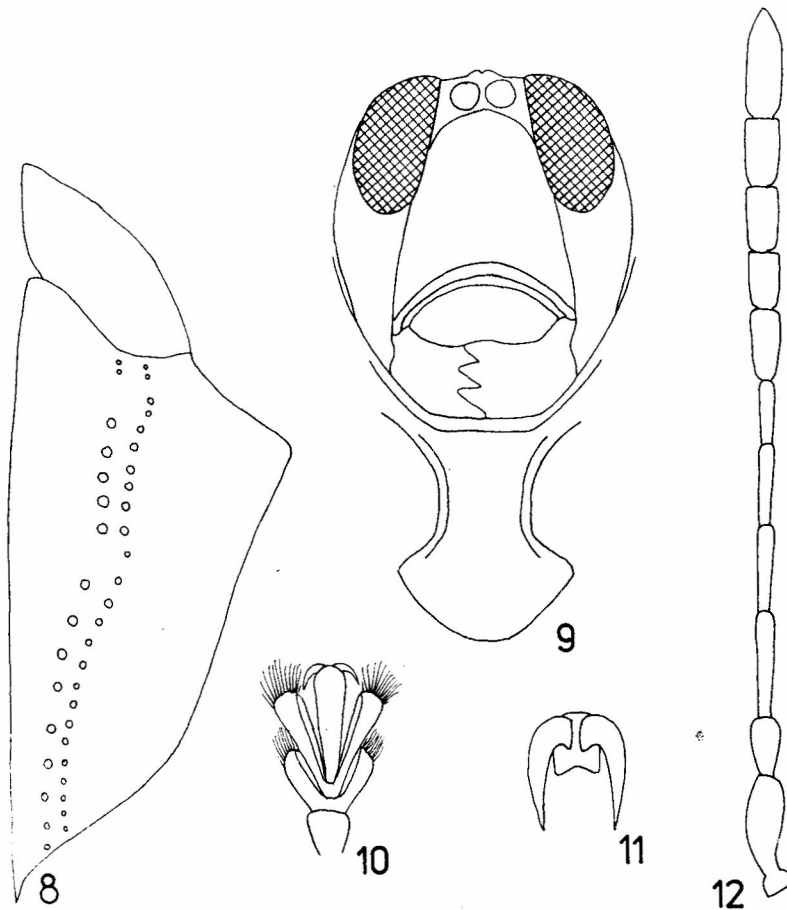
Length: 6.7–7.0 mm, width: 5.9–6.3 mm, length of pronotum: 2.1–2.3 mm, width of pronotum: 3.6–4.0 mm.

Yellow to green, last antennal segment more or less infusate to black. Elytra uniformly yellow or green, often with two small black stripes in posterior half of postscutellar tubercle, sometimes with reddish to brown spot in posterior half of disc, occupying area between suture and third row of punctures, the spot is often expanded apically to fourth or fifth row.

Surface of pronotum glabrous, with very small, indistinct microreticulation. Sometimes sides of disc with several shallow punctures, distinctly visible in side light only. In the middle of the lateral margin of disc small, but sharp emargination. Metasternal plate regularly convex. Mid femora without subapical tubercle, external side of tibiae without longitudinal canaliculation. Length ratio of antennal segments: 100: 50: 95: 80: 70: 60: 70: 60: 65: 65: 110 (fig. 12).

MATERIAL EXAMINED

Australia, Tambourine, 21 II 1927, J. HACKER, 2 (QM); National Pk., XI 1920, H. HACKER, 1 (QM); Bunya Mts., 10 XII 1925, H. HACKER, 2 (1 QM, 1 LB), Bunya Mts., 1 (QM); Dorrige Plat., NE N.S.W., 11 X 1955, J. G. FIKNER, 1 (QM); Nanango Distr., S. Q., XI 1927, H. HACKER, 1 (LB); Clarence R., N.S.W., LEA, 2 (SAM); MacLeay R., HELMS, 2 (SAM); Cape Hawk, 1 (SAM); Manning R., N.S.W., 1 (MM); N. Queensl., Cooktown, 4 II 1948, 1 (CAS), Cooktown, 1 (QM); Neu-Süd-Wales, STAUDINGER, 1 (holotype, ZMHU); Australia, 1 (CAS).



8-12. *Austropsecadia chlorina*: 8 - body in profile, 9 - head and prosternum, 10 - tarsus, 11 - tarsal claws, 12 - antenna

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